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2 ABSTRACT OF THE DISCLOSURE
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4 A bioptical holographic laser scanning system employing a plurality of laser scanning stations
5 about a holographic scanning disc having scanning facets with high and low elevation angle
6 characteristics, as well as positive, negative and zero skew angle characteristics which
7 strategically cooperate with groups of beam folding mirrors having optimized surface geometry
8 characteristics. The system has an ultra-compact construction, ideally suited for space-
9 constrained retail scanning environments, and generate a 3-D omnidirectional laser scanning
10 pattern between the bottom and side scanning windows during system operation. The laser
11 scanning pattern of the present invention comprises a complex of pairs of quasi-orthogonal laser
12 scanning planes, which include a plurality of substantially-vertical laser scanning planes for
13 reading bar code symbols having bar code elements (i.e. ladder-type bar code symbols) that are
14 oriented substantially horizontal with respect to the bottom scanning window, and a plurality of
15 substantially-horizontal laser scanning planes for reading bar code symbols having bar code
16 elements (i.e. picket-fence type bar code symbols) that are oriented substantially vertical with
17 respect to the bottom scanning window.